

Summary¹

In this report the Index of Sustainable Economic Welfare (ISEW) is compiled for Flanders for the period 1990-2013. The index is a comprehensive measure of economic welfare in that it measures the contribution of a country's or region's economy to the overall level of well-being of its citizens. In this regard, the ISEW can be regarded as an indicator for the economic dimension of well-being.

When analysing the level of sustainable economic welfare in a country or region, the ISEW considers both the benefits and the costs of economic activities. As such, the ISEW is clearly distinct from the Gross Domestic Product (GDP) that counts the market value of all final goods and services produced in an economy without distinguishing between activities that contribute to the overall level of well-being and activities that have a negative impact on well-being. In the broader 'Beyond GDP' debate, the ISEW is regarded as one of the most important alternatives to GDP when measuring economic welfare. The main advantage of the ISEW over other alternative indices is that it is calculated in monetary terms, so that it can directly be compared to the GDP. All components in the methodology of the ISEW are expressed in monetary terms using valuation methods from different types of literature (e.g. environmental economics for the valuation of environmental degradation, social economics for the valuation of household labour and the welfare losses from income inequalities and so on).

The methodology of the ISEW takes the private consumption expenditures of a country or region as its starting point, as it is assumed that these consumption expenditures constitute the main benefits from economic activities. Next, a number of corrections are made to incorporate both positive and negative welfare effects: part of the public consumption expenditures and the value of household labour are added to the private consumption base of the ISEW, while the defensive part of private consumption expenditures and the welfare losses from income inequalities are deducted. Finally, one capital adjustment is made to adjust for durable consumer goods. Two other capital adjustments (net capital growth and changes in the net international investment position) were included in the previous studies on the ISEW for Flanders, yet the components are dropped in this study as they are not in line with the theoretical framework of the ISEW that is built on the income concept of Fisher (1906). Within the ISEW, the costs of economic activities are mainly due to the loss of ecosystem services that occur either through environmental degradation (water and air pollution, climate change, ozone layer depletion) or through the depletion of natural capital. The ISEW is calculated as the difference between the benefits and the costs of economic activities.

The ISEW for Flanders that is calculated in this report shows that the level of sustainable economic welfare per capita in the region did not increase between 1990-2013 as much as the Gross Regional Product per capita. Over the period, the ISEW/capita increased by 19,9 % (or 0,78 % each year) while the GRP/capita increased by 28,6 % (or 1,10 % on a yearly basis). When the study period is divided into shorter time periods, one can see that the ISEW/capita grew steadily in the 1990s and the early 2000s at a rate that was higher than the growth rate of GRP/capita. Between 2002 and 2006 the ISEW/capita dropped significantly, only to level off from 2007 onwards. The decrease of the ISEW/capita between 2002 and 2006 is caused by an increase of the income inequalities in Flanders and, to a lesser extent, by the increase of the environmental costs (climate change and the use of non-renewable energy resources). In the relatively stable period after 2006, the year 2009 stands out as the ISEW/capita grew by 10,5 % and this while the GRP/capita fell by 3,9 % in the same year as a consequence of the financial and economic crisis. The strong growth of the ISEW/capita is due to a decrease in the use of non-renewable energy resources – over 2008 and 2009 the use of non-renewable energy resources in Flanders dropped by 6 %. In 2010 the use of non-renewable energy resources increased strongly (+7,3 %) due to the economic revival, causing the ISEW/capita to drop by 10,9 %. In 2011 and 2012, the use of non-renewables dropped once again (by 9,2 % in total), yet non-renewable energy use increased by 1,9 % in 2013. The shift in the trend over time of the income inequality in Flanders led to a decrease of the associated welfare losses that compensate the increased costs of carbon dioxide emissions and non-renewable energy use.

The trend over time of the ISEW in Flanders is quite different from the trend over time of the Gross Regional Product (GRP). The GRP increased steadily until 2008 and dropped since by 5,7 %. The ISEW looks beyond the value of market transactions and takes into account non-market activities such

¹ Bleys (2013) can be consulted for a more detailed presentation in English of the ISEW for Flanders.

as household labour, the distribution of incomes and the environmental impact of production and consumption. As a result, the ISEW can be stimulated using a wide range of policy measures: reducing pollution levels, striving for a more equal distribution of incomes and so on. The system approach of the ISEW is one of the main benefits of the index over the GDP. Since the start of the current economic crisis (2008) the ISEW/capita has increased by 4,4 %, while the GRP/capita decreased by 5,3 %. This is due to the fact that the ISEW does not only look at the benefits of economic activities, but also at the related costs.

This report includes an extensive review of the methodology used in the compilation of the ISEW for Flanders. The valuation methods of a number of components in the index have been contested in the past. For instance, a researcher has to choose between a number of options when estimating the costs of climate change: should (s)he look at the impact of past emissions on the current level of well-being, should (s)he look at the impact of the current emissions on future generations or should (s)he include both? Next, the valuation method used to estimate the depletion of natural capital in the ISEW has also attracted criticism. Currently, the annual consumption of non-renewable energy resources is valued at a replacement cost that increases at a rate of 3 % a year. In this report the valuation method for non-renewable energy use is updated: a more recent estimate of the replacement costs (based on biofuels) is used and the fixed escalation factor has been dropped. It is, however, clear that the ISEW could still benefit from a clearer and theoretically better supported set of valuation methods that draw from recent research efforts. In this report, a number of very recent studies on cost estimates for water and air pollution were used that were specifically set up for the Flemish region. These estimates contribute to the overall value of the index.

A second problem with using the ISEW is that it is difficult to compare the results of ISEW compilations in different countries due to problems with data availability and personal choices from the researchers involved. This lack of comparability underlines the need for a widely accepted and internationally agreed upon methodology for the ISEW. In this "2.0" methodology, a number of updated valuation methods should be included, so that the monetary estimates in the index are made according to the latest available data and techniques. The process to arrive at such an updated methodology has been started. This study makes a contribution to this process by exploring new valuation methods for both the costs of water pollution and air pollution. Once a standardised methodology is agreed upon, the ISEW can be compiled for a series of countries or regions, allowing for a meaningful comparison of the results.